

NUREG/CP-0130
CONF-9020823
Vol. 1

Proceedings of the 22nd DOE/NRC Nuclear Air Cleaning Conference

Sessions 1-8

Held in Denver, Colorado
August 24-27, 1992

Edited by M. W. First

Sponsored by
U.S. Department of Energy
U. S. Nuclear Regulatory Commission
International Society of Nuclear Air
Treatment Technologies, Inc.
The Harvard Air Cleaning Laboratory

Proceedings prepared by
The Harvard Air Cleaning Laboratory



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Springfield, VA 22161

NUREG/CP-0130
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Date Published: July 1993

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M. W. First

Sponsored by
Office of Nuclear Safety
U. S. Department of Energy
Washington, DC 20585

Office of Nuclear Regulatory Research
U. S. Nuclear Regulatory Commission
Washington, DC 20555

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22nd DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE

FOREWORD

The Editor of the Proceedings of the 22nd DOE/NRC Nuclear Air Cleaning and Treatment Conference wishes to call attention to a small change in the title of the Conference. Addition of the word "Treatment" is intended to signify an enlarged interest in the processing of gaseous effluents from nuclear waste treatment operations at the same time that the traditional concerns of the Conference, cleaning nuclear reactor and fuel processing/reprocessing gaseous effluents, remain a major component. Indeed, the recent introduction of advanced civilian power reactor designs has renewed interest in nuclear reactor air cleaning technology.

Principal financial support for the 22nd DOE/NRC Nuclear Air Cleaning and Treatment Conference was provided by the U.S. Department of Energy (Office of Environmental Guidance) and the U.S. Nuclear Regulatory Commission (Severe Accident Issues Branch), both successor agencies of the U.S. Atomic Energy Commission that sponsored the first thirteen Conferences in this series. The Nuclear Regulatory Commission undertook responsibility for printing and distributing the Conference Proceedings. The International Society of Nuclear Air Treatment Technologies (ISNATT), a private industry association of individuals and companies interested in all aspects of nuclear air treatment technology, has also assisted with the financial support of the Conference. Thanks are extended to all three for their contributions of funds and, especially, for their valuable advice and guidance.

Thanks are due to all authors, session chairmen, panelists, and the many speakers from the floor who, after the Conference, carefully reviewed their contributions and promptly returned their edited texts thereby making it possible to complete the preparation of the Proceedings in a timely manner. The purpose of completing the Proceedings in the shortest possible time is to make important information widely available while still highly relevant for current operations.

The principal tasks associated with preparing the Proceedings in a timely manner were performed ably by Mrs. Joan K. Sullivan who also provided essential administrative services before and during the Conference. I am certain that I speak for everyone associated with the Conference in extending a thank you to Mrs. Sullivan for many jobs well done. In addition, I would like to thank Julia First for her kind attention to the hospitality functions designed for the family members accompanying those attending the technical sessions.

The Program Committee members, listed on the facing page have in addition to chairing all the sessions, provided fresh ideas for soliciting technical papers and for organizing panel sessions. They are deserving of high praise for their dedication to maintaining the excellence of these Conferences.

Melvin W. First
3 March 1993

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J. Paul, *Westinghouse Savannah River*
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Duke Power Company

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Members: L. Soffer, *Nuclear Regulatory Commission*
H.E. Vanpelt, *Duke Power Company*
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